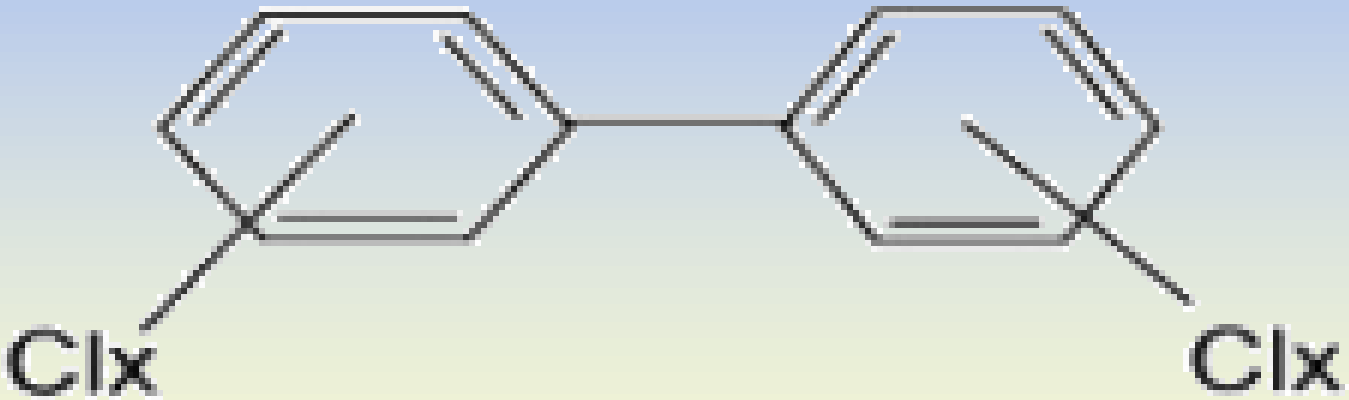
PCB TMDL Monitoring Guidance Document



Arthur Butt
VADEQ
June 11, 2007

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Guidance Document Outline

TMDL Monitoring and/or Data Collection and Analysis to Characterize Point Source Loadings of Low Level PCBs

- ***I Introduction***
- ***II Background***
- ***III Definitions***
- ***IV Procedures***
  - ***A Facilities***
  - ***B Method***
  - ***C Frequency and Duration***
  - ***D Analytical Requirements***
  - ***E Laboratories***
  - ***F References***
- ***V Attachments***

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Guidance Document

- *I Introduction*
- *II Background*
- *III Definitions*
- ***IV Procedures***
  - ***A. Facilities***
  - ***B. Method***
  - ***C. Frequency and Duration***
  - ***D. Analytical Requirements***
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IV Procedures

A. Facilities

VPDES discharging to impaired waters for PCBs.

? all majors (1.0 mgd design capacity and above including CSOs)

? selected minor facilities and industrial storm water that comprise a significant volume of flow to the receiving impaired waterbody

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Probable source of PCB
- industrial / commercial -

SIC Code	Code Name Facility
26	Paper and Allied Products
30	Rubber and Misc. Plastics
33	Primary Metal Industries
34	Fabricated Metal Products
37	Transportation Equipment
49	Electrical, Gas and Sanitary Services
1221 & 1222	Bituminous Coal

Source: Belton et al. 2005

IV Procedures

B. Methods

The monitoring will required using the highly sensitive analytical method 1668A capable of detecting very small amounts of PCBs and the complete spectrum of the 209 PCB congeners (EPA 1999)

This Guidance Document only specifies the approach to be used. Specific procedures will be developed through a Clean PCB PS Monitoring Field Standard Operating Procedure (SOP).

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IV Procedures

C. Frequency and Duration

Program 1 – all major dischargers

At least two manual composite samples designated as one wet (high) and one dry or base (low) flows during the first year.

Program 2 - minors and CSOs

One wet and one dry over two years

Subsequent monitoring would be dependent on the results observed

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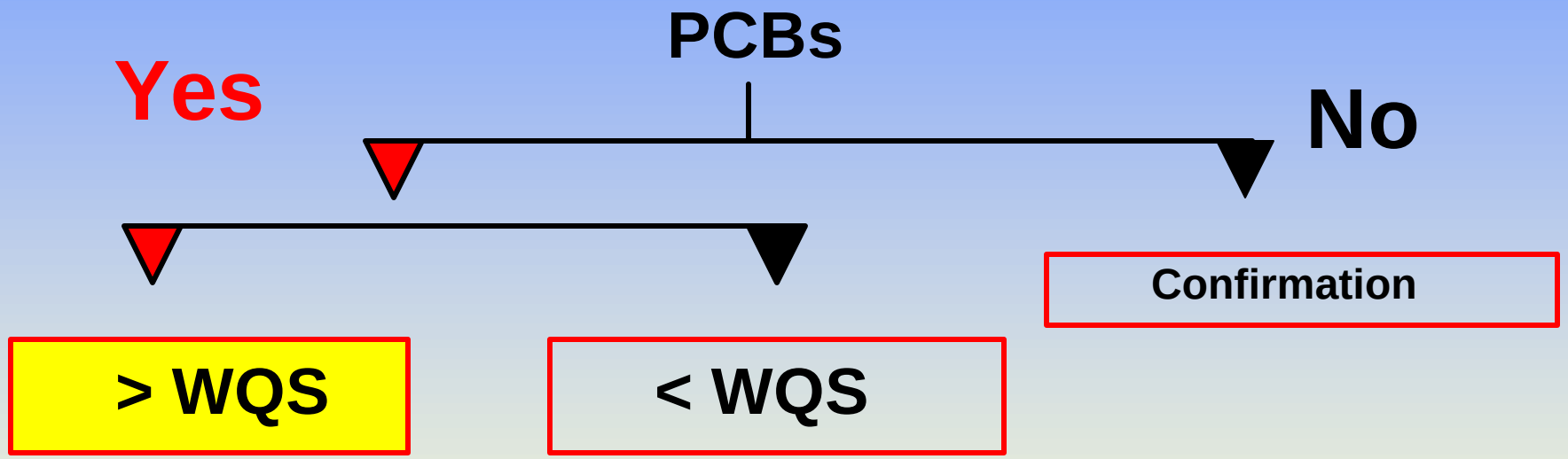
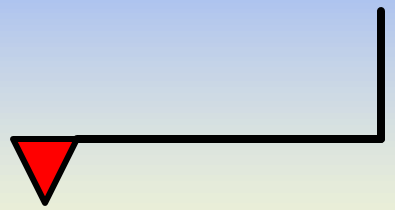
Duration -



Water Quality Standard (WQS) = 1.7 ng/L (1,700 pg/L)

Proposed = 0.64 ng/L (640 pg/L)

PCBs



yes

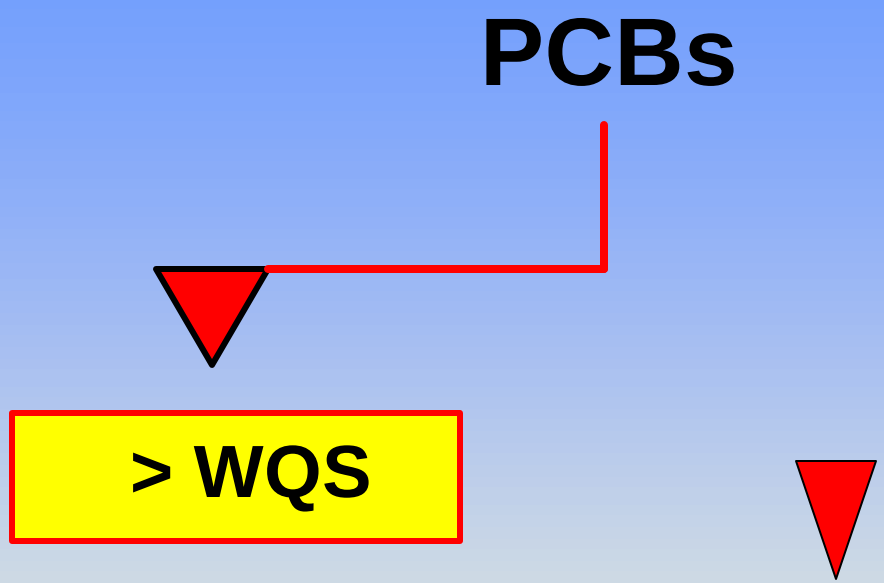
< WQS ► confirmation

Recommend

< 500 pg/L – 1 additional sample w/n year

> 500 pg/L – 2nd year of sampling

- (refer to Program rules)



Recommend

Confirmation + options =

pollutant minimization plan (PMP) or

storm water pollution prevention plan (SWPPP)

IV Procedures

D. Analytical Requirements

To ensure consistency between sampling events and among participants collecting samples with uniform quality control (QC) requirements for the PCB analysis by EPA Method 1668A. This analytical method uses ultra-clean sample collection and handling techniques along with high resolution gas chromatography/high resolution mass spectrometry (HRGC/HRMS).

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IV Procedures

E. Laboratories

<u>Response to Mr. Dodson</u>:

1. Sampling

c - DEQ can not endorse any laboratory, but will provide a list of “acceptable” labs that have agreed to a set of established laboratory performance requirements

Mr. Dodson -
1. Sampling

a) Will the samples be collected over a period of one year on a quarterly and bi-monthly basis or will permittees be allowed to collect samples on an irregular basis during the year?

b) Will the collection of wet samples be allowed to be lump together during the rainy season or will they have to be spread out over the year and will the increase in plant flows caused by melting snow be acceptable as wet sample conditions?